STATE ENDANGERED

FEDERALLY THREATENED

Piping Plover

(Charadrius melodus)

MDIFW

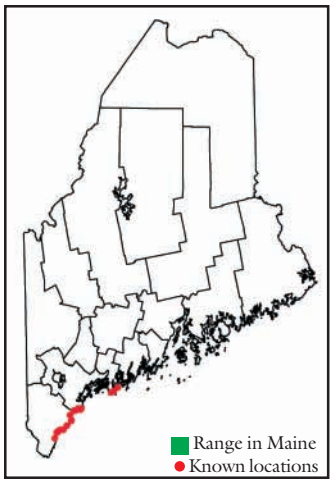
Description

The piping plover is a small, handsome shorebird (about seven inches long) found on sandy beaches and dunes in southern Maine. Its back is a uniform sandy brown color. The underside is white, and is interrupted by a single narrow black band around the neck. The bill is short and orange with a black tip. The legs are orange. The semipalmated plover, a common migrant on beaches in late summer, is similar in appearance, but has a darker brown head and back and a wide brown or black collar.

Summer visitors to southern Maine beaches have a good opportunity to see piping plovers. Signs, fenced sections of beach, and nest exclosures identify areas of the beach that are being managed for nesting piping plovers. By giving the birds space and following a few rules of beach etiquette, we can share the beach with this endangered species.

Range and Habitat

The piping plover breeds in three distinct populations in North America. About 1,400 pairs nest in alkali wetlands and along large rivers in the northern Great Plains of the U.S. and Canada. A tiny population of only about 20 pairs nests on beaches along Lakes Superior and Michigan. The Atlantic coast population of about 1,500 pairs nests on ocean beaches from Newfoundland to South Carolina. Wintering areas include the southeast Atlantic coast from North Carolina to Florida and the Gulf Coast south to the Yucatan Peninsula.



Habitat for the piping plover includes beaches, mudflats, sandflats, tidal ponds, and salt marshes. On the Atlantic coast, nest sites include open sand, gravel, or shell-covered beaches above the high tide line. Sand spits, barrier islands, blowout areas in dunes, and dredge spoil are preferred nesting areas.

Life History and Ecology

After returning to breeding beaches in Maine in April, males establish and defend a territory by elaborate aerial displays. The breeding territory includes both feeding and nesting habitat. When the male has attracted a mate, one of several scrapes is selected as the nest site and is lined with pieces of shell and tiny pebbles. Over a period of six days the female lays a clutch of four eggs. Incubation begins after the laying of the last egg and lasts for about 28 days. Both sexes share with incubation and feeding young. If the first nest is destroyed, females may re-nest.

Within hours of hatching, the precocial chicks leave the nest but stay close to be brooded by the parents. Parents lead the chicks away from the nest scrape a day or two after hatching, but usually remain within the established territory. Chicks remain close to parents and alternate between feeding and being brooded. Adult females may desert broods within 5-10 days after hatching. Fledging occurs in 28-32 days.

After fledging, adults and young congregate on feeding areas prior to migration. Piping plovers feed primarily on marine worms and small crustaceans

found in the "splash zone," although they also feed extensively in piles of wrack (seaweed) that accumulates at the high tide line. Intertidal flats and back dune ponds are also used for feeding. Plovers can live to be 14 years of age.

Threats

Habitat loss and degradation, human disturbance, and predation threaten the recovery of this species. Over two-thirds of Maine's 30 miles of beaches have been lost as nesting habitat for piping plovers because of construction of jetties, seawalls, and high density housing. Maine's beaches are used by tens of thousands of visitors annually during the plover nesting season. Beach users can crush nests and chicks and disturb feeding birds. Pets (dogs and cats) destroy nests and harass plovers. Vehicles required for beach maintenance activities, especially beach sweeping and garbage collection, can crush eggs and chicks and alter habitat. Beach sweeping and removal of the wrack line also eliminates valuable feeding habitat. Garbage left on beaches attracts predators, including foxes, skunks, raccoons, crows, and gulls, all of which readily prey on plover eggs and chicks. Beach restoration and "nourishment" activities can have a net benefit for plovers if done in the off-season, but also may attract birds to high human use areas. Without intensive management, the aforementioned threats would rapidly reduce Maine's plover population to near-extinction.

Conservation and Management

Piping plover populations declined in the 1800s because of unlimited harvesting for subsistence and the millinery trade (ladies' hat decorations). Numbers increased and peaked in the 1940s following the passage of the Migratory Bird Treaty Act. After WWII, many Maine beaches were rapidly developed for summer homes, and populations of plovers and other beach nesting birds plummeted. By 1981, only seven pairs could be found in the state.

Atlantic coast piping plovers are federally threatened, and they were listed as endangered in Maine in 1986. A state recovery plan was written for plovers in 1990. Piping plover nesting, feeding, and brood-rearing habitats were given legal protection by Essential Habitat designation in 1995. Essential Habitat designation requires that all projects funded, permitted, and carried out by municipalities and state agencies in mapped areas be reviewed by MDIFW.

Piping plover management begins in April when plover territories on beaches are fenced and signed. These areas offer refuge from human disturbance for nesting birds and recently fledged chicks. Wire mesh exclosures are placed around nests as soon as they are found to prevent predation by birds and mammals. Biologists and wardens patrol nesting areas several times weekly to deter dogs, educate the public, and monitor nests and chicks. In some instances, programs to deter or remove nest predators have been initiated. Population and productivity data are collected each year to monitor population health and recovery status. Plovers share their beach environment with nesting least terns (endangered) and many other migratory shorebirds.

In some communities, municipalities help with monitoring and management activities. Intensive management has enhanced productivity and survival of young, and numbers have steadily increased to 55-60 pairs at about 20 sites in the late 1990s.

Recommendations:

✔ Avoid further residential development of beach and dune habitats. Review Essential Habitat maps and guidelines prior to development near plover and tern beaches and adjacent dunes, intertidal areas, and salt marshes. Consult with a biologist from MDIFW and the U.S. Fish and Wildlife Service prior to any project that alters beaches or dunes.

✔ Municipalities should strive to maintain important beach and dune systems identified by MDIFW as open space, identify these areas in comprehensive plans, and conserve accordingly.

✔ Use voluntary agreements, conservation easements, conservation tax abatements and incentives, and acquisition to protect important habitat for threatened and endangered species.

✔ Follow the state and federal laws and regulations pertaining to sand dunes.

✔ To preserve water quality and wetland functions, maintain contiguous, forested riparian habitats at least 250 feet from salt marshes adjacent to plover and tern nesting areas. Follow Shoreland Zoning standards.

✔ Avoid major projects and activities on plover and tern beaches during the nesting season (April 1 to August 31).

✔ Do not approach plovers or terns or their nests. Respect fenced or posted areas to protect endangered species and other wildlife.

✔ Keep pets off the beach during the nesting season (April 1 to August 31).

✔ Remove trash from the beach. Carry in/carry out is the best trash collection policy.

✔ Avoid flying kites or placing beach volleyball areas within 150 yards of plover or tern nesting areas.

✔ Avoid fireworks within one mile of nesting areas.

✔ Avoid use of vehicles on the beach during the nesting season. If vehicles are used, employ a "spotter" to walk in front of the vehicle to search for eggs and chicks.

✔ When feasible, remove jetties and seawalls that adversely affect plover and tern habitat.